REMARKS

Claims 47-49 are new. The claims remaining in the application are 1-49.

Specification:

An abstract has been added to the specification.

Claim Objections:

Claims 41-47 were misnumbered and have been renumbered 40-46 respectively. The dependency of renumbered claims 42, 44 and 45 has been corrected to reflect the renumbering.

Rejection Under 35 U.S.C. § 112

The Examiner has rejected claim 2 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which application regards as the invention. This rejection is respectfully traversed. Claim 2 has been amended to correct the insufficient antecedent basis.

Rejection Under 35 U.S.C. § 102

The Examiner has rejected claims 1-3, 25-27, 31-33, 38, 39, 41, and 43-46 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,754,308 (Lopresti et al.) This rejection is respectfully traversed.

Lopresti et al. discloses a copier that reads a DocID on a scanned document. The copier uses a DocID, printed on the scanned document, to get the original file to print so that the copy is an original instead of a scanned version of the original. The DocID may also include information used to generate the original so that the copy may be made the same. Lopresti et al. also discloses a fax machine, that reads a DocID printed on the scanned page, and gets the original data from a file specified by the DocID. In addition, the fax machine may obtain processing information from the DocID and apply it to the original that it is creating.

Claim 1 of the present invention specifies "An output print produced by an image processing apparatus, comprising: (a) a substrate having an image thereon; and (b) a machine readable marking coupled to said substrate,

wherein said machine readable marking identifies a data source." On page 3, lines 19-31 the present invention discloses obtaining images from satellites, aerial apparatus, medical or industrial diagnostic images, or images from oceanographic devices. Each one of these data sources is different, requiring different processing prior to printing. Lopresti et al. discloses a digital file containing data. He does not disclose nor teach recording where the data in the file originated or how the data was processed. Lopresti et al. discloses placing a pointer in a newly created DocID for a scanned document that points to the DocID of the original. However, the data source of the original is still unknown. See column 7, lines 19-29. Lopresti et al. also discloses the DocID including the identification of the person who generated the page. See column 8, lines 18-23. He does not teach to record whether the page is a typed original, or a drawing, or a digital image captured with a camera, or a digital scan of a photographic image. Nor does he teach to record the name, manufacturer, or model of the digitizing device. These data sources are ignored by Lopresti et al., who only is concerned with saving the address of the digital file so that the ideal copier or fax machine may obtain the original data to make the copy. In the present application, one document may consist of many data sources. For instance, a composite page may contain text, linework, scanned images, and digital images. Lopresti et al. only discloses a single original digital file.

In claim 2 of the present application "an output print produced by an image processing apparatus, comprising: (a) a substrate having an image thereon; and (b) a machine readable marking coupled to said substrate, wherein said machine readable marking identifies at least one processing parameter employed by the image processing apparatus to process the image provided by the data source." Claim 2 refers to the machine readable information identifying at least one processing parameter. Lopresti et al. discloses reproductive information such as exposure levels, paper size, and paper quality, may be included in the DocID.

The present application lists processing parameters that are much more substantial than that disclosed by Lopresti et al. and is also more specific to proofing than to copying. Lopresti et al. does not disclose using the copier, or fax as a means to create additional identical proofs. Lopresti's disclosures all consist of a scanner, scanning an original.

The present invention is different from Lopresti et al. in that a proof is created, which is used as a target for a press run. See page 6, lines 17-19 "A preprocess proof is not an original; rather, it is a representation of the desired press output." The present invention is not creating a copy of an original. Lopresti et al. is always creating a copy of an original. The making of the original is implied, or there would be no DocID on it. Lopresti et al. does not disclose using a DocID on a proof, or using a press as a copier. Lopresti et al. does not disclose putting the original digital filename, the location of the file, and processing information used to print the file, into the DocID.

Lopresti et al. also discloses sending the scanned image with the DocID to a receiving fax machine, which decodes the DocID and uses it to retrieve the original file and process it with information in the DocID to create a copy. The present invention uses a machine readable marking on a proof to guarantee that a remote proof is created from the same digital data with the same processing. The present invention sends the machine readable data, and possibly the original digital files. Lopresti et al. sends the scanned image with the DocID included in the scan information. The fax machine then tries to retrieve the original digital file from a storage location so that it can make copies from the original digital data.

A press is not usually referred to as a copier or a fax machine, both of which are used to make small numbers of duplicates from a scanned original. The present invention applies machine readable information to a proof created from a digital source. The proof is used to setup a printing press to make a large number of inexpensive originals. The machine readable markings are used to guarantee that the printing press is setup identically to how the proof was made so that it is possible to setup the press to match the proof. The proof is made on equipment substantially different from the printing press. The proof is not considered an original, but rather a simulation of the digital image. All of the claims of the present invention refer to the creation of a proof.

Rejection Under 35 U.S.C. § 103

The Examiner has rejected claims 4-7, 13, 14, 17-24, 28, 34, 35-37, and 40 under 35 U.S.C. 103(a) as being unpatentable over Lopresti et al. This rejection is respectfully traversed.

The Examiner has rejected claims 10-12 under 35 U.S.C. 103(a) as being unpatentable over Lopresti et al. as applied to claim 4 above, and further in view of U.S. Patent 5,644,408 (Li et al.) This rejection is respectfully traversed.

The Examiner has rejected claim 16 under 35 U.S.C. 103(a) as being unpatentable over Lopresti et al. as applied to claim 13 above, and further in view of Li et al. This rejection is respectfully traversed.

The Examiner has rejected claim 30 under 35 U.S.C. 103(a) as being unpatentable over Lopresti et al. as applied to claim 28 above, and further in view of Li et al. This rejection is respectfully traversed.

The Examiner has rejected claim 42 under 35 U.S.C. 103(a) as being unpatentable over Lopresti et al. as applied to claim 41 above, and further in view of Li et al. This rejection is respectfully traversed.

The Examiner has rejected claims 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over Lopresti et al. as applied to claim 4 above, and further in view of U.S. Patent 6,426,806 (Melen). This rejection is respectfully traversed.

Claims 25-34 of the present invention claim that the machine readable mark contains metadata. Lopresti et al. discloses including document generation and reproduction information in the DocID. See column 2, lines 45-47. The Examiner cites column 4, lines 29-49 for claims 25 and 27; and column 5, lines 12-33 for claims 26 and 27. In column 4, lines 29-49 Lopresti et al. discloses storing the location of the file that created the original. In column 5, lines 12-33 Lopresti et al. discloses photocopying and reproduction parameters such as exposure levels, paper size, and paper quantity. In the present application metadata as defined as information describing the data source and processing steps used to create it. This includes camera information for images, or scanner information for scanned images, or font information for text. The present invention discloses on page 3, lines 25-31 "As examples, images digitally obtained via satellite or aerial apparatus, medical or industrial diagnostic images, or images from oceanographic devices often require additional metadata in order to enable correct interpretation of the image data or printing of an image using such data. Images from such devices, because these images are provided as digital data, can undergo a substantial amount of processing before such images are provided on an output print." Lopresti et al. does not include information on the source of the digital data other than the filename. Lopresti et al. assumes that

the scanned image is a document. In the present application the input to be a digital source is much more than a document. It is important to maintain this information as many times the resultant output image is a convolution between the output processor and the input. A digital proof is created on a proofer, and later will be reproduced on a press which is a different output device. Lopresti et al. assumes that his copier or fax is capable of reproducing the scanned image the same as the next copier or fax. As an example, the metadata from a camera may include color filter information for the digital sensor in the camera. This color filter information could be used with the color primaries in the image processor to modify the image to produce a better color proof. Lopresti et al. does not disclose storing information, metadata, about the digital source.

The Examiner claims that hash functions and digital signatures are well known and would be obvious to one skilled in the art to be included in the DocID described by Lopresti et al. What is unique about the present invention is using hash function to guarantee that a second proof is identical to a first proof including the source of the digital information and the processing used to create the proof. There is a need to know that the two proofs are indeed identical, and what a second customer at a second location viewing a second proof is seeing matches the first proof that a first customer at a first location is seeing. Lopresti et al. does not teach using the hash function to guarantee that two proofs are identical. Lopresti et al. does not teach encoding CRC and error correcting codes into the DocID. See column 8, lines 22-23. Presumably this is to guarantee that the files are transmitted properly. However, Lopresti et al. does not teach to read the CRC from the DocID on an original, and compare it to a CRC from a DocID on a second original, to check that both originals are the same.

Lopresti's first claim includes "A system for producing a high quality paper version of a page provided to an image generating portion thereof, said system comprising: scanning means for scanning said page to locate encoded indicia on said page to ascertain an address at which a stored digital representation of said page can be accessed;". The present invention does not claim scanning a whole page and automatically finding and decoding the indicia. It does, however, disclose a barcode reader or other such device to read the machine readable information. The present invention does not claim nor disclose including the address of the digital information that composes the page. The

present invention does disclose using a filename to specify the digital information. In the case wherein the file is a postscript file containing pictures the present invention discloses using a raster image processor to create digital bitmaps from the original digital files, which are then printed to create the output proof. These digital bitmaps are transient files, and the filename refers to the digital source. The present invention also discloses including the page setup information that specifies how the raster image processing is performed. Lopresti's address might contain a filename, or point to a reference containing a filename. However, a filename by itself may not indicate the location of a storage device that contains the file.

Lopresti's claim continues with "means for accessing said stored digital representation of said page with said address; and means for outputting a paper version of said page from said accessed stored digital representation or by photocopying said page when no encoded indicia are located thereon." The present invention does not claim a means to access the original stored digital information, but only discloses recording the identity of the data source.

In conclusion, the differences between the present invention and the Lopresti et al. reference revolves around a misunderstanding of the term "data source" used in the claims of the present invention. The data included in the machine readable code on documents in the Lopresti et al. disclose a location of the file used to create the document. The reason for this is that the document file can be used to print another document rather than having to make a photocopy of the current document. The "data source" of the present invention provides information about how the document was created. This is extremely important when comparing proofs, which are prepared from advertising information and used to approve setups before the document goes to a printing press. The proofs, which are often compared at different remote locations, must be identical prior to printing many thousands of copies on a separate printing press.

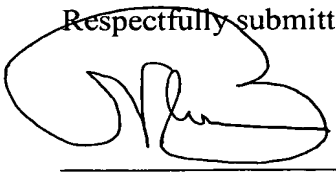
CONCLUSION

Dependent claims not specifically addressed add additional limitations to the independent claims, which have been distinguished from the prior art and are therefore also patentable.

In conclusion, none of the prior art cited by the Examiner discloses the limitations of the claims of the present invention, either individually or in combination. Therefore, it is believed that the claims are allowable.

If the Examiner is of the opinion that additional modifications to the claims are necessary to place the application in condition for allowance, he is invited to contact Applicant's attorney at the number listed below for a telephone interview and Examiner's amendment.

Respectfully submitted,



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